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NOTES ON THE COATIS OF THE MEXICAN MAINLAND.

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The general range of *Nasua narica*, transcontinental in tropical Central America, is split in southern Mexico by the great wedge formed by the interior highlands. The coatis as a group favor the warmer territory at elevations up to about 4,000 feet. From a point a short distance north of the Isthmus of Tehuantepec, diverging branches extend northward along the Gulf slope to southern Texas and near the Pacific coast and the warm western flank of the Sierra Madre to southeastern Arizona. A review of accumulated material indicates that the coatis of Mexico are assignable to six closely allied, but fairly well marked, geographic races. Three of these inhabit sections along the Atlantic side and three are restricted to the Pacific slope of the continent.

In the coatis of this group, the color pattern is nearly uniform, but individual variation in the ground color may extend from very dark brown to light buffy tones. Those inhabiting extremely humid regions are generally darker than those living in drier areas. Nasua narica narica ranges over the lowlands and lower mountain slopes in Vera Cruz, Tabasco, northern Oaxaca, and northern Chiapas. Most of its habitat is subjected to heavy rainfall, and cloud forests along the mountain slopes are included. As might be expected, it is characterized by dark coloration. The skull is of medium size, with retreating frontal profile, widely spreading zygomata, and light dentition. Nasua narica yucatanica inhabits the low, flat peninsula of Yucatan, comprising the states of Yucatan, Campeche, the Territory of Quintana Roo, northern Guatemala, and probably northern British Honduras. It is paler than typical narica, and the skull is usually narrower, with decidedly narrower zygomata. Nasua narica molaris is widely distributed from Jalisco south through Colima, Michoacan, Guerrero, Morelos, and adjoining parts of the states of Mexico and Puebla to southwestern

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Oaxaca. It is the largest of the Mexican races and moderately dark in color, some specimens resembling those of typical *narica;* but the skull differs notably in the more swollen and convex frontal region and much heavier dentition. *Nasua narica pallida* is the coati of the lower western slopes of the Sierra Madre from Sinaloa north to southeastern Arizona. This race is smaller and usually paler than *molaris*, to which it is closely allied. The following descriptions of two subspecies, hitherto unrecognized, brings the total number of Mexican forms to six, as already mentioned.

Nasua narica tamaulipensis, subsp. nov.

TAMAULIPAS COATI.

Type.—From Cerro de la Silla, near Monterrey, Nuevo Leon, Mexico (altitude 2,600 feet). No. 116754, young σ , with first permanent molars in place, skin and skull, U. S. National Museum (Biological Survey collection); collected by E. W. Nelson and E. A. Goldman, March 28, 1902. Original number 14974.

Distribution.—Warmer, low mountain slopes and other forested parts of Coahuila, Nuevo Leon, and Tamaulipas; rarely along the Rio Grande Valley from Brownsville west to near the Big Bend above the mouth of the Pecos River in Texas.

General characters.—Size medium; colors pale; skull with low, somewhat flattened, instead of distinctly convex, frontal region; dentition rather light. Very similar in general to Nasua narica narica of Vera Cruz, but color paler; dentition heavier. Differs from Nasua narica pallida of the lower western slopes of the Sierra Madre of Chihuahua and Sonora mainly in cranial details, especially the less swollen frontal region.

Color.—Type (March, unworn pelage): Ground color of upper parts near "wood brown, Ridgway, 1912," the hairs along the median line of back with a dark brown subapical band, giving way to "cinnamon-buff" tips which thin out on the rump; top of head and neck "cinnamon"; sides of neck and edges of ears white; outer sides of forearms overcast with dull white; throat, chest, inner sides of forearms, and narrow median line of under parts to base of tail dull whitish, becoming "wood brown" abruptly along sides of abdomen; white facial markings as in allied subspecies; feet "Hay's brown"; tail near "cinnamon"; slightly darker toward tip, the white and dark annulations very faintly discernible. A nearly full grown male from Soto la Marina, Tamaulipas, and an adult female from Brownsville, Texas, are still paler, the upper parts mainly "cinnamon buff" in color.

Skull.—Similar in size and general form, including the retreating frontal profile, to that of *narica*, but dentition heavier. Comparison with *pallida*: Size similar; braincase and rostrum lower; frontal profile straighter, and somewhat flatter, less swollen and convex; dentition similar.

Measurements.—Type: Total length, 850 mm.; tail vertebrae, 420; hind foot, 110. A nearly full grown male from Soto la Marina, Tamaulipas: 1050; tail vertebrae, 515; hind foot, 112. Skull (type and a nearly full grown male from Soto la Marina, Tamaulipas, respectively: Greatest length, 107.2, 129; condylobasal length, 100.8, 124.3; zygomatic breadth,

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50.8, 65.2; height of cranium (from palatal shelf to median point over postorbital processes), 31.3, 35.7; depth of rostrum (behind canines), 15, 17.9; interorbital breadth, 20.8, 25.4; maxilary tooth row (alveoli), —, 48.5; upper carnassial, crown length, —, 7.8, crown width, —, 7.8. An adult female from Brownsville, Texas; Zygomatic breadth, 65.1; height of cranium (from palatal shelf to median point over postorbital processes), 35.5; depth of rostrum (behind canines), 15.1; interorbital breadth, 27; maxillary tooth row (alveoli), 44.7; upper carnassial, crown length, 8.1, crown width, 7.9.

Remarks.-N. n. tamaulipensis intergrades on the south with typical narica, the only form with which close comparison is required. It is based on few specimens, but field observations indicate that this coati is not uncommon locally in the more extensively wooded sections south of the Mexican border, throughout Tamaulipas and suitable parts of the adjoining states on the west. Stanley P. Young reports its occurrence as far north and west as the foothills of the Carmen Mountains in Coahuila, just south of the Big Bend of the Rio Grande. According to Taber (Jour. Mamm., vol. 21, p. 11, February 14, 1940), a specimen was captured some 20 miles below Boquillas in the Dead Horse Mountains on the Texas side of the Rio Grande, in the same general region, about January 10, 1939. Bailey (North Amer. Fauna No. 25, p. 192, October 24, 1905), referred to Nasua narica yucatanica a specimen collected at Brownsville, Texas, by J. C. Merrill in 1877. J. A. Allen, the describer of *yucatanica*, was given as authority for the identification, and the suggestion was made that the specimen might have been an imported animal that escaped from captivity. It is now obvious that the identification was erroneous, and there is no reason for assuming that the Brownsville specimen was not native.

Specimens examined.—Total number, 6, as follows:

Nuevo Leon: Cerro de la Silla, 1 (type); Monterrey, 1 (skull only).

Tamaulipas: Cuidad Victoria, 2 (skulls only); Soto la Marina, 1. Texas: Brownsville, 1.

Nasua narica isthmica, subsp. nov.

TEHUANTEPEC COATI.

Type.—From Santa Efigenia, an hacienda about eight miles northwest of Tapanatepec, southeastern Oaxaca, Mexico (altitude 1,200 feet). No. 74681, σ adult, skin and skull, U. S. National Museum (Biological Survey collection); collected by E. W. Nelson and E. A. Goldman, July 29, 1895. Original number 8246.

Distribution.—Southern Oaxaca and southeastward along the Pacific coast to Salvador.

General characters.—A medium-sized, light-colored subspecies; dentition rather heavy. Similar in general to Nasua narica narica of Vera Cruz and Nasua narica yucatanica of Yucatan, but larger and paler; skull larger and differs in detail. Similar in size to Nasua narica molaris of Colima, but color paler; skull narrower. Differs from Nasua narica richmondi of Nicaragua mainly in much paler coloration.

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Color.—*Type* (worn pelage): Upper parts in general a mixture of "pinkish buff" or "cinnamon-buff," brown, and dull whitish, the whitish tips of hairs over dorsum producing a coarsely grizzled pattern; under color over dorsum near "pinkish buff"; top of head clearer "cinnamon-buff"; sides of neck and upper part of forearms pale "pinkish buff"; ears edged with white; white and dusky facial markings, as usual in the group, the white line uninterrupted over eye; under parts in general "wood brown," thinly overlaid with white; chin whitish; feet brownish black; tail much worn, "cinnamon-buff," with rings faintly indicated.

Skull.—Most closely resembling that of molaris, but narrower; zygomata decidedly narrower; frontal region less swollen and convex, sloping downward more directly to rostrum; dentition less heavy. Comparison with typical narica: Skull larger, more elongated; zygomata less widely spreading; dentition heavier. Comparison with *yucctanica*: Skull decidedly larger; zygomata similarly narrow; dentition much heavier. Comparison with *richmondi*: Similar in size and spread of zygomata, but lambdoid crest less prominent than in the type; dentition heavier.

Measurements.—Type: Total length, 1,194 mm.; tail vertebrae, 588; hind foot, 113. Skull (type and an adult male from Tehuantepec, respectively): Greatest length, 136.2, 133.2; condylobasal length, 128.7, 128.9; zygomatic breadth, 72.1, 74.6; height of cranium (from palatal shelf to median point over postorbital processes), 39.5, 39.9; depth of rostrum (behind canines), 20, 20; interorbital breadth, 26.9, 27.3; maxillary tooth row (alveoli), 52.5, 50.8; upper carnassial, crown length, 8.3, 7.6; crown width, 7.7, 7.6.

Remarks.—N. n. isthmica is based on very limited material presenting a combination of detailed characters that seems to warrant the segregation of a regional race. In size and rather heavy dentition it approaches N. n. molaris, but in the narrowness of the zygomata and slight swelling of the frontal region, relationship to N. n. yucatanica is suggested. No close comparison with the larger race Nasua narica bullata of Costa Rice seems necessary. A young female from Lagoon of Hopango, Salvador, is small, but is tentatively referred to *isthmica* owing to similarity in pale coloration.

Specimens examined.—Total number, 6, as follows:

Oaxaca: Guichicovi, 2; Santa Efigenia (type locality), 1; Tehuantepec, 2 (skulls only). Salvador: Lagoon of Ilopango, 1.